

### Abstract

An SINR estimating unit (~~301~~) of a receiver apparatus (~~32~~) measures first and second demodulated signals ( ~~$y_1, y_2$~~ ) to calculate SINR (ratio of signal power to sum of interference power and noise power) for each signal sequence. A transmission parameter deciding unit (~~111~~) decides, based on the SINR, a transmission parameter ( ~~$X_{\text{next}}$~~ ) used by a transmitter apparatus (~~31~~) for controlling the transmission for each signal sequence, and then feeds the decided transmission parameter back to the transmitter apparatus (~~31~~). First and second mapping units (~~201-1, 201-2~~) of the transmitter apparatus (~~31~~) controls, based on the transmission parameters ( ~~$X_{\text{ctrl}}$~~ ) as fed back, the modulation level for each signal sequence.